Endorsements reimagined

Agentic AI for the future of policy servicing

Abstract

Endorsements—midterm adjustments to insurance policies—are vital for addressing evolving customer needs. These changes, whether premium-bearing or not, carry significant financial and risk implications. Yet, manual workflows, fragmented data and rising costs continue to hinder efficiency.

Cognizant® Property and Casualty Endorsement Solution leverages agentic AI to automate classification, routing and financial calculations using intelligent document recognition and natural language understanding. Early pilots show a 35% faster turnaround and a 40% productivity boost. The solution is also adaptable to life and amenities insurance.

Future enhancements will focus on explainable AI, adaptive compliance and predictive capabilities, aligning endorsements with economic conditions and simulating real-world disruptions for proactive recommendations. We invite insurers to pilot this solution and collaborate on advancing endorsement innovation through AI-driven transformation.

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Introduction

Endorsements as both opportunity and bottleneck

Endorsements are not mere amendments—they represent shifting risks, evolving customer needs and changing contractual obligations. Yet, most insurers continue to process them using outdated methods. Requests are often received in unstructured formats such as emails, scanned forms, PDFs or even handwritten notes. Data is frequently incomplete or inconsistent, and workflows remain fragmented, heavily reliant on manual intervention.

The costs are significant. Out-of-sequence endorsements often trigger financial and legal inconsistencies. Industry analysts consistently highlight that manual workflows dominate policy servicing, slowing down issuance, renewals and reporting. For example,

1. Forrester notes that fractured data, inconsistent systems and low confidence in insurers' data assets are major bottlenecks for manual processes, including endorsements[1] and

2. KPMG further observes that carriers relying on legacy systems and manual handling are becoming structurally uncompetitive[2].

The message is clear: Insurers that fail to modernize endorsement processing face increasing operational risk, customer dissatisfaction and regulatory pressure. In an era where customer expectations and digital competitors are reshaping the industry, endorsement efficiency is no longer a back-office concern—it is a strategic differentiator.

Our solution: Cognizant® Property and Casualty Endorsement Solution

Intelligent orchestration of endorsements

We have designed an agentic AI-based solution, Cognizant® Property and Casualty Endorsement Solution, grounded in domain expertise and modern AI technologies to reimagine endorsement processing.

The solution transforms how insurers manage midterm adjustments by embedding automation, intelligence and transparency into every stage of the process. It addresses common errors—such as data gaps, incorrect updates and omissions—typically caused by manual, paper-driven workflows, while reducing costs and improving turnaround times.

Our current design simulates integration with CRM systems to demonstrate how incoming endorsement requests can be automatically fetched and classified. Using OCR and natural language processing, the solution reads both structured and unstructured documents—including ACCORD and ERM forms—and extracts critical details like policy numbers, insured names and requested changes. It identifies the intent behind each request, validates it against reference records and classifies it as in good order (IGO) or not in good order (NIGO). Incomplete or unclear submissions are flagged for review, ensuring no request is overlooked.

Role-based workflows guide each request through the appropriate path—whether handled by associates, verified by auditors or escalated to underwriters. Auditors can review multiple documents in a unified interface, approve or reject requests and send feedback using predefined templates.

When endorsements affect premiums or coverage, the system captures financial impact and generates customer-ready communications. Resubmissions are automatically linked to the original case, preserving end-to-end traceability.

For underwriters, bulk processing accelerates complex endorsements, while a secure, role-based dashboard provides real-time visibility into request statuses such as IGO, NIGO and out of scope.

Architecture

The Cognizant® Property and Casualty Endorsement Solution integrates seamlessly with business applications to transform how endorsement cases are processed.

As depicted in Figure 1, when a case is received through the CRM application (in a simulated environment), the document ingestion and extraction agent—powered by Amazon Textract—digitizes and structures the incoming documents. The extracted information then moves into case processing, where the orchestration agent coordinates the flow across multiple specialized AI agents.
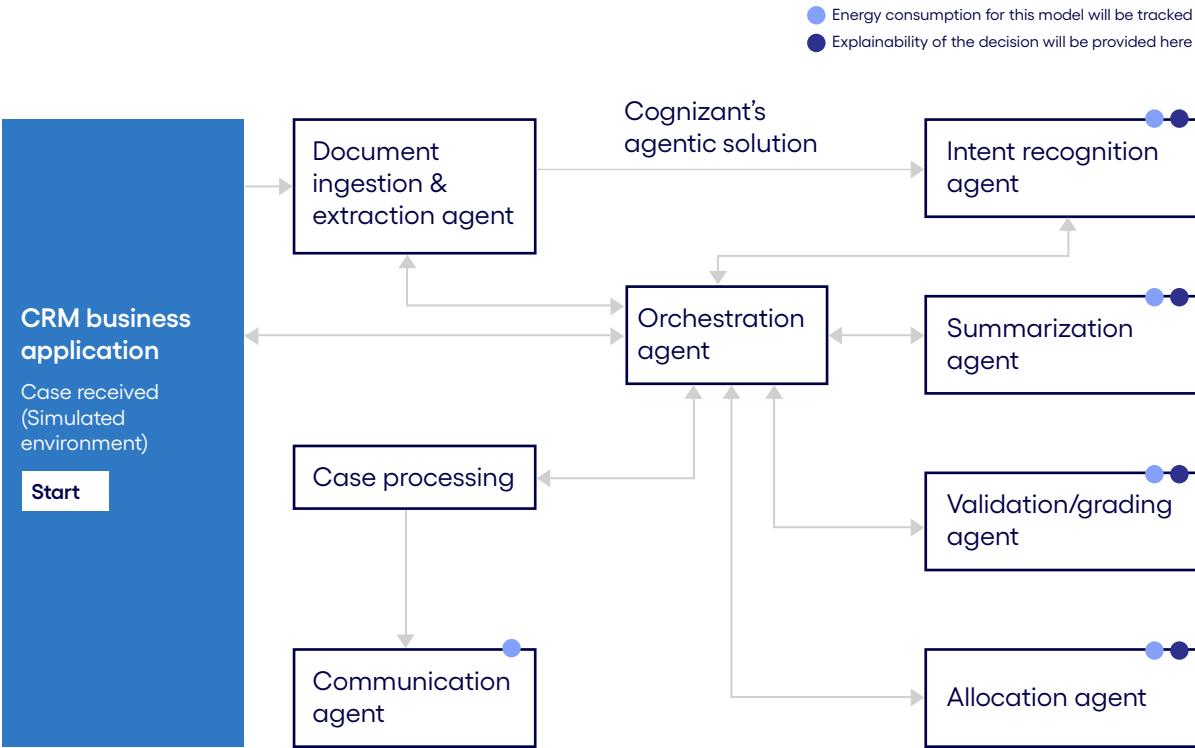

Figure 1: Our agentic AI process flow for endorsement process

- The intent recognition agent interprets the nature and purpose of each request

- The summarization agent condenses complex case details into concise, actionable insights

- The validation/grading agent (leveraging LLMs such as Llama 3.3 and Claude Sonnet 4) checks for accuracy, compliance and traceability

- The allocation agent routes validated requests to the appropriate process or team for resolution

- The communication agent generates explainable, AI-driven emails and messages stakeholders to clearly understand what action was taken and why

Energy consumption for each model is continuously tracked to ensure transparency and responsible AI usage. By combining automation, contextual intelligence and built-in explainability, this orchestrated agentic architecture accelerates endorsement workflows, reduces manual effort, enhances accuracy and builds trust in every decision.

Results

By combining intelligent automation agents with built-in explainability,

Cognizant Property and Casualty Endorsement Solution is designed to deliver measurable business impact. Organizations adopting this model can expect the following benefits:

35%
reduction in operational costs through streamlined, automated endorsement workflows

40%
faster endorsement turnaround, accelerating case processing and improving responsiveness

40%
boost in team productivity by reducing manual effort and enabling focus on higher-value activities

15%
increase in customer satisfaction, driven by faster, more accurate and transparent interactions

Future work: Toward predictive, transparent and adaptive endorsement intelligence

With the rapid advancement of AI technologies and the development of frontier models, we are exploring their integration into our solution to make it truly future-ready.

To sustain momentum, we are advancing several enhancements, including:

- Developing explainable intelligence so underwriters and compliance teams clearly understand not only the outcomes but also the reasoning behind them

- Integrating reinforcement learning from human feedback to continuously improve system performance

- Enabling hierarchical reasoning that connects granular endorsement data to portfolio-level risk insights

- Building adaptive compliance engines capable of keeping pace with evolving regulations across jurisdictions

- Exploring predictive endorsements—anticipating customer needs before requests are made, using signals from policy usage, claims history and external data

From a business perspective, we see significant value in linking endorsements with economic and world models. Economic models will align endorsements with macro- and microeconomic conditions, strengthening pricing, reserving and risk sensitivity. World models will simulate real-world scenarios—from climate events to geopolitical shocks—to stress-test portfolios, forecast demand and generate proactive, context-aware recommendations.

Though the agentic solution has been primarily built for property and casualty insurance sector endorsements, its capabilities are adaptable across domains such as life and annuities insurance.

Call to action

We invite insurers and policy service providers to pilot this model in controlled environments, measure its impact and validate the outcomes. By collaborating, your organization can help set new industry benchmarks in endorsement processing, co-create scalable solutions and participate in future research—ultimately driving greater efficiency, transparency and trust across the value chain.

Statements and declarations

Authors' contributions

All authors contributed to the study conception and design.

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This work was fully funded by Cognizant in support of the study and the development of the proposed solution.

Code availability

The code developed as part of this study can be made available to enterprises interested in piloting the solution within their controlled environments. For access, please contact one of the authors.

References

1 Forrester. (2025). Insurance Industry Survival Relies on Data Sophistication.

2 KPMG. (2025). Operational Excellence in Insurance.

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